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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/957,424 | 09/21/2001 | Lee Kok Tong | CS00-198 | 3261 |
| 28112 | 7590 | 04/08/2004 | EXAMINER | |
| GEORGE O. SAILE & ASSOCIATES 28 DAVIS AVENUE POUGHKEEPSIE, NY 12603 | | | WRIGHT, WILLIAM G | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1754 | |
| DATE MAILED: 04/08/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/957,424

Applicant(s)

TONG ET AL.

Examiner

William G. Wright SR.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16,17 and 26-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16,17 and 26-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claim 30 is rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 30 line 3 of the response filed at the PTO on December 22, 2003 the phrase "without first applying a combustion process" is considered new matter. This negative limitation does not find support and is not properly described in the instant application as filed.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered

therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 16, 17 and claims 26-~~2~~³3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Santis '349.

De Santis teaches a silane gas treatment process using wet scrubbing with water. This teaching is found at column 2 line 29 et seq. The specific teaching of nitrogen being in the carrier gas is found at column 5 line 11 et seq. where the reactive gas stream is taught to be made up of nitrogen, oxygen and silane. The teaching of the formation of silicon dioxide in the form of fine particles made in the presence of water is found in column 6 line 35 et seq.

The reference does not teach the treatment of waste silane with oxygen dissolved in water. The reference forms a silica precipitate in the presence of oxygen and water. Therefore it would appear that oxygen is dissolved in the water.

The instant claimed invention is obvious from the teachings

of the applied reference. The teachings of air (oxygen) in contact with water are easily noted from Figure 1. Of that Figure the No. 11 teaches contact between liquid and gas, No. 3 teaches water, No. 13 air, spent scrubbing liquid is noted at No. 7 where water, oxygen, silicon dioxide and silane are all in contact. This area No. 7 is where the last remnants of the selenium gas are reacted to ensure total reaction to the product silicon dioxide. Column 5 lines 44 et seq. is where this teaching is found. It is considered an obvious expedient available to a practitioner to use the process of Figure 1 to make the contact of oxygen, water and silane found in the instant claims. These teachings show the instant claimed invention to be obvious.

Applicants' arguments filed December 22, 2003 have been fully considered but they are not deemed to be persuasive.

The applicants argue that De Santis uses a wet scrubber in addition to a combustion process.

The De Santis reference does not require combustion as applicants argue. The De Santis reference teaches at claim 1 the instant process of water treatment of effluent gas without a claimed combustion feature.

The applicants argue that the instant process provides the

oxygen for the combustion by way of the water. The invention of the reference is argued by the Examiner to provide the oxygen in the gas stream of the applied reference. It is taught as an alternative preferred embodiment at column 5 lines 18 and 19 of the reference that the feedstream consists of pure silane. Thus no combustion would be part of the process, as the feedstream is 100% silane. This teaching is found at column 5 line 19 et seq.

The applicants argue that new claim 30 claims the absence of a combustion process, the Examiner has made a rejection over new matter in regard to claim 30 and thus the argued limitations of new claim 30 are not persuasive.

The applicants argue the composition of the feedstream. The Examiner's position is that the feedstream's disclosure of 100% silane at column 5 line 19 is sufficient to meet any feedstream argument presented by the applicants. In regard to the feedstream composition and the mixing of the oxygen from the air with the water in the chamber, the applicants' attention is directed to Figure 1 where air is shown in No. 13 as being directed across makeup water No. 10. Thus the oxygen from the air would be expected to be dissolved in the makeup water 10. Additionally the recycle water from pump No. 8 that then enters the chamber through line 3 into contact area No. 11 is felt to have disclosed oxygen in it and thus meets the requirement of the

instant claims on the claimed requirement of the water containing oxygen.

The extra expense argued by the applicants is not a germane matter. The rejection is maintained and made FINAL.

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

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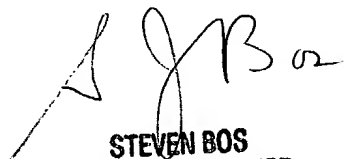
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G. Wright, Sr. whose telephone number is (571) 272-1361. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1558. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9306 for the regular communications and (703) 872-9311 for after final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


W. G. Wright, Sr.:cdc
April 2, 2004


**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**